

EL'YASBERG, M.Ye.; VERKHOLAT, M.Ye.; RUBASHKIN, I.B.

"Electric industrial equipment" by A.S. Sandler. Reviewed by
M.E. El'iasberg, M.E. Verkholat, I.B. Rubashkin. . . . Elek-
trichestvo no.8:95-96 Ag '60. (MIRA 13:8)
(Machine tools)
(Sandler, A.S.)

S/121/62/000/010/001/005
DO40/D112

AUTHOR: El'yasberg, M.Ye.

TITLE: The fundamentals of a theory of self-excited chatter in metal-cutting

PERIODICAL: Stanki i instrument, no. 10, 1962, 3-8

TEXT: This article, which is to be continued, deals with a new theory explaining the self-excited chatter in metal cutting (M.Ye. El'yasberg, "Izvestiya AN SSSR, ONTI", no. 9, 1958; M.Ye. El'yasberg, "Stanki i instrument", no. 3, 1959), based on the discovery that the cutting force P and the friction force Q on the cutter face (Fig.1) are "delayed" forces, i.e. forces coming into effect with a delay. The article contains more accurate data on the constants characterizing this delay in cutting different steels with different speeds and feeds. This data, gathered since publication of the author's earlier work, will make it possible to calculate vibration-free machine tools more accurately. The chip formation process is analyzed, and illustrated by graphs and high-speed photographs. Empirical research data are given for low-carbon and high-carbon steel grades 25 and 50. The data are accompanied by graphs. There are 10 figures.

Card 1/2

S/121/62/000/011/001/002
D040/D112

AUTHOR: El'yasberg, M. Ye.

TITLE: The fundamentals of the self-excited chatter theory

PERIODICAL: Stanki i instrument, no. 11, 1962, 3-6

TEXT: This is the end of an article which started in "Stanki i instrument", no. 10, 1962, and deals with a new theory of self-excited chatter in metal-cutting machine tools. This theory is based on the discovery of the lagging effect of the cutting and friction forces, and helps to calculate vibration-free machine tools more accurately. Linear equations are derived for calculating systems with two degrees of freedom, and general recommendations are made for simplifying the calculation of complex systems for vibration-free operation, with the use of electronic simulation. There are 4 figures.

Card 1/1

KRYSANOV, V.I., inzh.; FUKS, A.I., inzh.; EL'YASBERG, M.Ye., inzh.

Technical and economic analysis of the dimensional spacing of
machine tools. Vest. mashinostr. 45 no.5:70-75 My '65.

(MIRA 18:6)

EL'YASBERG, P.Ye.

EL'SBERG, P.Ye.

Determining the density of the upper atmosphere by means of
secular changes in the elements of orbits of the first two
artificial earth satellites. Isk.sput.Zem. no.1:21-24 '58.
(MIRA 12:2)

(Artificial satellites)

(Atmosphere, Upper--Rocket observations)

EL 'YASBERG, P. YE.

29(0) **ELITE I BOOK EXPOSITION** 207/1658
 Abstracts book ISBN
 Leksionnyye spetsial'nyi, 779. 1: Krasnaya machynaya izobrazheniya, prove-
 deniya po programme MOO pri pomoshchi perseg i vtorogo izobrazheniya
 spetsial'nyi spetsial'nyi (Artificial Earth Satellites, Pt. 1: Results of Scientific
 Studies Carried Out in Accordance With the IOT Program by Means of the First
 and Second Artificial Earth Satellites) Moscow, Izd-vo AN SSSR, 1961. 95 p.
 3,500 copies printed. [Microfilm and Xerox Copy]

Repr. Mst. I.V. Kuznetsov; Ed. of Publishing House: D.M. Akhmetov; Tech. Ed.:
 T.V. Polubina.

FOREWORD: This collection of articles is the first in a series to be published
 regularly and is intended to disseminate to the scientific community data col-
 lected in investigations performed by means of artificial earth satellites.

CONTENTS: This collection includes papers covering scientific data obtained from
 the first and second Soviet artificial earth satellites. Among the areas
 reported on are measurements of cosmic radiation, atmospheric density, electron
 concentration in the ionosphere, and biological studies of an animal occupant
 of a satellite. Papers on the motion and position of artificial earth satel-
 lites and optical and Doppler methods of satellite tracking are also included. Cover-
 age of the individual articles is given in the Table of Contents.

EL 'YASBERG, P. YE. Determination of the Density of the Outer Atmosphere
 from Stellar Variations of the Orbital Elements of the First Two Arti-
 ficial Satellites

This paper discusses the analytical method used to determine the ef-
 fect of air resistance on the secular variations of the orbital elements

Artificial Earth Satellites (cont.)

of artificial satellites. The paper also presents the results of determinations
 of the density based on observations of two spectra, and the rocket-carrier
 of the first. The mean square error in the minimum altitude is estimated at
 1.3 km for Spectral I and 1.9 km for Spectral II. The mean density from the
 observations of Spectral I and its rocket carrier were somewhat lower than the
 values obtained for Spectral II. A study of the sources of error leads to the
 conclusion that the overall error in density does not exceed 30 percent.
 There are 4 references, 2 of which are Soviet, 2 translations from English. 21

89(0) PAGES: 1000 INFORMATION 8907/3065

Izvestiynyye spytinski nauti, 1979. 3 (Artificial Earth Satellites, No. 3)
Moscow, Izd-vo Akademi naut SSSR, 1979. 125 p. 5,500 copies printed.

Sponsoring Agency: Akshaya TV No. 2032.

Prof. M.: L.V. Kuznetsov; Ed. of Publishing House: L.V. Samokhin; Tech.
Ed.: Ya. Rylov.

FOURIER: This collection of articles is the third in a series intended to disseminate data collected from artificial earth satellite investigations to scientists.

CONTRACT: The collection of articles deals with various problems arising in the operation of artificial satellites. The papers also cover the use of artificial satellites as scientific instruments for various types of geophysical investigations.

b. Metzky, N.V., and Y.P. Pechenkin. On Perturbations in the Orbits of Artificial Satellites Caused by the Resistance of the Air

5. Vukobin, I.M., and V.Y. Beletskiy, Observation of Artificial Satellites Using the Anticipation Method (sered omladya).

5. D'YUBETSKY, P. Ye. Secular Variations of Orbit Elements as a Function of the α -
-~~Distance of the Air~~ ^{Distance of the Air}

I. Larus't'ev, M.A. Problem of Rectification of Conoid Surfaces

B. Shklyarsky, I. S., and V. O. Kurt. Determination of the Density of the Atmosphere at an Altitude of 450 m by the Method of Sodium-vapor Diffusion 66

9. Ignat'ev, I. N., and Ya. N. Zhurav. Methods of Preventing Interference Currents Arising at the Point of Impact of an Electrovoltile Flammable. *Journal of Chemical Engineering*, 4, 2, 1963, 104-105.

10. **Kitcherich, V.V., B.S. Drullin, A.I. Baryar, and V.A. Scheplov.** Some
 Results of Observations on the "Fission" of *Staphylinus* and the *Staphylinus* *Staph.*

the Aid of the Third Soviet Sputnik

The Composition of the Upper Atmosphere

2. Artificial Satellites

The Negative Field of the Earth

65-106-47
12/2/77

EL'YASHEVO, P.Ye.

~~Relationship between secular changes in orbit elements and the
air resistance. Isk. sput. zem. no.3:54-60 '59.~~

(MIRA 12:12)

(Artificial satellites)

EL'YASBERG, P.YE.

PHASE I BOOK EXPLOITATION SOV/4281

Akademiya nauk SSSR

Iskusstvennyye sputniki zemli, vyp. 4 (Artificial Earth Satellites, No. 4)
Moscow, 1960. 205 p. Errata slip inserted. 6,500 copies printed.

Resp. Ed.: L.V. Kurnosova; Ed. of Publishing House: M.I. Fradkin; Tech. Ed.:
T.P. Polenova.

PURPOSE: This collection of articles is intended to disseminate data collected
in investigations performed by means of artificial earth satellites.

COVERAGE: The collection consists of 15 articles dealing with scientific data on
Soviet artificial earth satellites (AES) and cosmic rockets. The topics dis-
cussed include measurements of the density of the upper atmosphere, motion of
AES, measurements of micrometeorites and meteoric matter, magnetometric measure-
ments of cosmic rays, electrical potential, and spectrum of positive ions. The
collection is part of a series published regularly. References follow each
article.

Card 1/6

Artificial Earth Satellites, No. 4

SOV/4281

TABLE OF CONTENTS:

Kislík, M.D. Motion of an Artificial Satellite in the Normal Gravitational Field of the Earth

The study of the motion of the AES is made without taking the resistance of air into account. The results obtained can be used for the calculation of orbits of high flying satellites and also for the qualitative analysis of the influence of the contraction of the earth on the motion of satellites.

El'yasberg, P.Ye., and V.D. Yastrebov. Determination of the Density of the Upper Atmosphere According to the Results of Flight Observations of the Third Soviet AES

18

Kelegov, G.A. Variations of the Upper Atmosphere Density According to Data of the Changing Period of Revolutions of AES

31

Results of the processing of experimental data obtained by the observations of the Soviet AES and some interpretations of these results are given.

Yatsunskiy, I.M. Determination of the Conditions of Illumination and the Time Intervals in Which the Satellite Remains in Sunlight and in Shadow

35

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Artificial Earth Satellites, No. 4

SOV/4281

The article discusses one of the possible methods of determining the conditions of illumination of satellites. The relative motion of the first, second, and third Soviet AES to the earth is briefly analyzed.

Eneyev, T.M., A.K. Platonov, and R.K. Kazakova. Determining Orbital Parameters of AES According to Ground Measurements 43

An abbreviated method of orbital parameter determination and forecasting of satellite motions is given. The method is based on data from the processing of optical and radiotechnical observations.

Taratynova, G.P. Methods of Numerical Solution of Equations in Finite Differences and Their Application to the Calculation of AES Orbits 56

The finite difference method is applied in the calculation of certain problems of celestial mechanics in the solution of systems of nonlinear differential equations determining the motion of AES in larger time intervals.

Lur'ye, A.I. Equation of Disturbed Motion in Kepler's Problem 82

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Artificial Earth Satellites, No. 4

SOV/4281

Stanyukovich, K.P.: Elements of the Shock Theory of Solid Bodies at High (Cosmic) Velocities

86

The author discusses the problems of shocks of meteorites at high (cosmic) velocity against the surface of a planet. This problem is related to the study of shocks of micrometeorites against the surface of AES

Mirtov, B.A. Meteoric Matter and Some Problems of Geophysics of the Upper Atmospheric Layers

118

The author attempts to connect phenomena occurring in the upper atmosphere with the presence there of particles of meteoric origin traveling at high velocities.

Dolginov, S.Sh., L.N. Zhuzgov, and V.A. Selyutin. Magnetometric Equipment of the Third Soviet AES

135

The working principle and installation of the magnetometric equipment on the AES are described. Characteristics of materials and the stability and precision of operation are discussed.

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- Shvarts, Ya.M. Method of Determining Electrical Potential of Bodies in Plasma 161
- Nazarova, T.N. Investigation of Micrometeorites on the Third Soviet AES 165
- Istomin, V.G. Some Results of the Measurement of the Spectrum of the Mass of Positive Ions on the Third Soviet AES 171
Measurements were made with a radio-frequency-mass spectrometer on the third Soviet AES at an altitude of 225 to 980 km and between 27° and 65° north latitude.
- Shafer, Yu.G., and A.V. Yarygin. Measuring Cosmic Rays on Geophysical Rockets 184
- Shklovskiy, I.S. Artificial Comet as a Method of Optical Observation of Rockets 195
The author describes various kinds of observation and compares relative errors. He discusses some Soviet and non-Soviet articles on the subject.
- Card 5/6

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80V/4281

Corrections

205

AVAILABLE: Library of Congress

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AC/pw/gwy
9-22-60

EL'YASBERG, P.Ye.

Determination of the orbit from two positions. Isk.sput.Zem.
no.13:3-22 '62. (MIRA 15:7)
(Artificial satellites--Orbits)

EL'YASBERG, P. YE. (Moscow)

"Approximate formulas for determining the life-time of Earth satellites".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964.

ACCESSION NR: AP4034792

S/0293/64/002/002/0198/0218

AUTHOR: El'iasberg, P. Ye.

TITLE: Approximate formulas for determining the lifetime of artificial Earth satellites

SOURCE: Kosmichoskiye issledovaniya, v. 2, no. 2, 1964, 198-218

TOPIC TAGS: satellite, artificial earth satellite, sputnik, satellite lifetime, air resistance

ABSTRACT: It is well known that the lifetime of artificial Earth satellites is basically determined by the effect of atmospheric resistance, but also by the perturbing influence of the Moon and Sun. The present article deals with the derivation of approximate formulas for determining the lifetime of such artificial satellites, flying at a relatively low height, for which the air resistance is decisive while other disturbing factors may be disregarded. The following are the author's fundamental assumptions in this connection: 1. The Earth is a sphere with radius $R = 6371$ km. 2. In determining the orbit, only the attraction toward the Earth and the air resistance are taken into account. 3. The acceleration due to gravity is directed toward the center of the Earth and its modulus equals $g = \mu/r^2$, where r is the distance from the center of the Earth and the coefficient $\mu = 3.986 \cdot 10^5 \text{ km}^3/\text{sec}^2$. The deceleration due to air resistance J is determined by the formula $J = c \rho v^2$, $c = \frac{c_x F_m}{2m}$.

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ACCESSION NR: AP4034792

where ρ is the density of air, v is the speed of the satellite with respect to the air, c_x is the air resistance, F_m and m are the area of the mid section and mass of the satellite.

5. The effect of atmospheric rotation can be disregarded. 6. The air density ρ depends only on the flight altitude $h = r - R$. 7. The air density ρ as a function of the altitude h is determined on the basis of the so-called isothermic model of the atmosphere, according to which $\rho = \rho_p \exp(-\frac{h - h_p}{H})$, where h_p is the height of orbital perigee; ρ_p is the air density

at the height h_p ; H is the height of the uniform atmosphere at perigee. If any other arbitrary atmospheric model is used, the constants ρ_p and H should be determined from the formulas: $\rho_p = f(h_p)$, $H = \frac{f(h_p)}{df(h_p)/dh} = -\frac{1}{d \ln \rho(h_p)/dh}$ Table 1 in the original shows the values of $\rho(h)$

and H , determined by this formula, for the atmospheric model CIRA-1961 which was used in this paper. The author then considers the following basic aspects of this general problem: secular perturbations of orbital elements, satellite lifetime in circular orbits, the lifetime of satellites in orbits with considerable eccentricities, the life time of satellites in orbits with small eccentricities. The result is a system of approximate formulas which embrace

Caru 2/3

ACCESSION NR: AP4034792

the entire possible range of eccentricity $0 \leq e < 1$. The article concludes with a comparative analysis and evaluation of the accuracy of the derived formulas, in which the author points out that these formulas contain errors caused by neglecting the principal sources of perturbations i.e., the elliptical shape of the earth, the lunar and solar attraction and the heterogeneous structure of the atmosphere. The lifetime of a satellite also depends on the eccentricity of its orbit, and the formulas derived are valid only at eccentricities far from the critical value. Orig. art. has: 2 figures, 4 tables and 51 formulas.

ASSOCIATION: none

SUBMITTED: 14Nov63

ENCL: 00

SUB CODE: SV

NO REF SOV: 004

OTHER: 003

Card 3/3

1 25670-66		ENT(1)/ENP(m)/EWA(d)		GN
ACC NR:	AM6008482	Monograph		UR/ 69 58 BH
El'yasberg, Pavel Yefimovich				
Introduction to the theory of flight of artificial Earth satellites (Vvedeniye v teoriyu poleta isskusstvennykh sputnikov Zemli) Moscow, Izd-vo "Nauka," 1965. 540 p. Illus., biblio., index., tables. 3700 copies printed. Series note: Mekhanika kosmicheskogo poleta				
TOPIC TAGS: space flight, artificial satellite orbit, space tracking, astronautics, spacecraft altitude				
PURPOSE AND COVERAGE: The author attempts to give a systematic outline of the theory of flight of artificial Earth satellites. Much attention is paid to the formulation of laws governing the motion of a satellite on the unpowered-flight portion of its trajectory but for the sake of continuity, the book includes certain subjects which are usually dealt with in classical celestial mechanics. However, the basic content of the book consists in the analysis of problems which are usually not considered in the classical celestial mechanics textbooks, but are of paramount importance for the solution of problems of the flight theory of artificial earth satellites, such as: investigation of satellite motion along circular and almost circular orbits; analysis of all possible versions of perturbed orbit				
Card	1/4	UDC: 629.195.1		

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ACC NR: AM6008482

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passing through two given points; the effect of variation of initial conditions of motion on the elements of elliptical orbits; variation of current characteristics of motion (of coordinates and of velocity vector components) due to deviation from the initial conditions of motion; the effect of the oblateness of the Earth and of air resistance on the motion of artificial satellites; determination of the life of satellites, and the effect of the perturbation of the Sun and the Moon on the motion of the Earth's artificial satellites. The book is intended for a wide range of specialists who encounter various problems in the flight theory of artificial satellites, and also for university students having courses on the subject of above theory. Contributions to the preparation of the book were made by the following: V. Ye. Volkov, I. G. Miroshnichenko, I. F. Petrovich, Ye. G. Portnov, A. I. Tkanchenko, A. A. Usikov, V. G. Khoroshavtsev, M. S. Shirokov, Z. K. Kuznetsova, Z. G. Androsova, and L. N. Kasatkina.

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Ch. XVII. Effect of the light pressure on the motion of artificial Earth satellites -- 501

Appendix I. Table of the basic parameters of the atmosphere CIRA 1961 -- 527

Appendix II. Table of the functions $H(h)$, $F(h)$, $\varphi(h)$, $k(h)$, and $\phi(h)$ for the atmosphere CIRA 1961 -- 529

Appendix III. Table of the functions $\psi(e_0)$, $\psi(e_0)$ and $\psi(e_0)$ -- 53

Appendix IV. Table of the functions $F_i(v)$ ($i = 1, 2, 3, 4$) -- 534

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SUB CODE: 02, 03/ SUB DATE: 09Nov65/ ORIG REF: 030/ OTH REF: 006

Card 4/4ckla

GVOZDEV, V.S., kandidat tekhnicheskikh nauk.; EL'YASBERG, S.Ye., inzhener.

Rebuilding of old dams serving metallurgical plants in the Urals.
Stal' 16 no.9:831-835 S '56. (MLRA 9:11)

1. Sverdlovskiye filialy Vsesoyuznogo instituta elektrifikatsii
sel'skogo khozyaystva.
(Ural Mountain region--Metallurgical plants) (Dams)

El'yasberg, S. Ye.

AUTHOR: El'yasberg, S. Ye., Engineer,

98-1-13/20

TITLE: Packing of Loam Into Cavities of a Spillway Under Winter Conditions (Ukladka suglinka v pazukhi vodosbroa v zimnikh usloviyakh)

PERIODICAL: Gidrotekhnicheskoye Stroitel'stvo, 1958, #1, pp 50 (USSR)

ABSTRACT: In March 1957, the necessity arose to complete the spillway of a hydroelectric power plant, under construction by "Ural-spetsstroy". The packing of loam was started on March 24, and finished by April 7, at average daily temperatures of + 0.5° to - 15.1°C. Prior to starting, snow and ice was removed, and the foundation was heated with open fires. Loam was handled by an excavator with a capacity of 0.5 cu m. The accomplished work proved the practicality of filling-up dams with loam under such temperatures, the work is carried out carefully, and the quarry is located nearby.

AVAILABLE: Library of Congress

Card 1/1

AUTHOR: EL'YASBERG, S. YE. 98-58-5-17/33
TITLE: Rationalization and Inventions (Ratsionalizatsiya i izobretatel'stvo). The Use of Slag in Hydrotechnical Construction (Primeneniye shlaka v gidrotekhnicheskom stroitel'stve)
PERIODICAL: Gidrotekhnicheskoye Stroitel'stvo, 1958, Nr 5, pp 49-50 (USSR)
ABSTRACT: In the Urals, basic and sour metallurgical slag is very often applied in the construction of low-pressure dams. The slag is used to protect the slopes of cofferdams from being scoured and also to reinforce the sides of temporary spillways, etc. Due to insufficient experience, however, it is too early to make final conclusions on the utilization of slag in hydrotechnical structures, but the possibility of utilizing slag in temporary and light duty construction is already reed upon. There are 2 schematic drawings.
AVAILABLE: Library of Congress
Card 1/1

AUTHOR: El'yasberg, S.Ye. and Leonov, G.I., Engineers SOV-98-58-9-10/21

TITLE: The Dissipation of Stream Energy in the Lower Waters of Low Pressure Dams (Gasheniye energii potoka v nizhnem b'yefe nizkonapornykh plotin)

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1958, Nr 9, pp 31 - 33 (USSR)

ABSTRACT: The authors recommend the construction of overflow sills with their terminal parts working as console water spillways for low pressure dams, instead of installing expensive reinforced concrete apron wells. It was observed that overflow sills in the old dams successfully protect them from the erosive action of lower waters. There are 3 diagrams and 2 Soviet references.

1. Dams--Design

Card 1/1

14(10)

SOV/98-59-2-13/22

AUTHOR: Gvozdev, V.A., Candidate of Technical Sciences,
and El'yasberg, S.Ye., Engineer

TITLE: Liquidation of Old Structures in the Body of Earth
Dams (Likvidatsiya starykh sooruzheniy v tele
zemlyanykh plotin)

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959,
Nr 2, p 48-49 (USSR)

ABSTRACT: The authors propose a simple method of liquidating
old structures in the shafts of earth dams during their recon-
struction. The method consists of erecting an anti-filter dia-
phragm in line of the existing cut-off wall and pouring the
fillers directly into the old opening of the dam. The old
foundation parts remain in the body of the dam. This method,
tried out during the reconstruction of numerous dams in the
Ural region, was found to be much more simple and economical
than other methods proposed by various planning organizations.

Card 1/1

EL'YASBERG, S.Ye.

Hydraulic calculations for infiltration water collect...
Vol. 1 can.tekh. no.4:23-26 Apr '59. (MIRA 12:5)
(Filters and filtration) (Water-supply engineering)

14(10)

SOV/98-59-5-11/21

AUTHOR: El'yasberg, S.Ye., Engineer

TITLE: Filling the Gaps at the Construction of Earth Spillways

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 5, p 38 (USSR)

ABSTRACT: The article is concerned with filling the gaps of two small earth dams built in the Central and North Urals in 1957. In this connection, the name of V.S. Gvozdev is mentioned. The author is of the opinion that the filling of gaps can be carried out in a more liberal way than prescribed by the planning organizations. However, this operation must be carried out in due time with subsequent rising of the water level and depending on what kind of filling material is available. There is 1 Soviet reference.

Card 1/1

EL'YASBERG, S.Ye., inzh.

Construction of cofferdams on silt. Gidr. stroi. 30
no.6:49-50 Je '60. (MIRA 13:7)
(Cofferdams)

... system components

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Prirodostro-
seniye. v. 6, no. 1, 1963, 38-46

... method consists essentially in reproducing a given poly-
... analog computer and ...

... of the polynomial coefficients is chosen with
... and with the degree ...

S/15/67 005 000 100 100 100

Engineering im. V. I. Ul'yanov (Lenin))

SUBMITTED: March 7, 1962

Card 2/2

EL'YASH, M.L.

New designs of sand blasting equipment. Mash. i nef. obor.
no. 11:33-35 '65. (MIRA 18:12)

1. Nauchno-issledovatel'skiy institut po montazhnym i spe-
tsial'nym stroitel'nym rabotam.

EL'YASHBERG, F. Ye.

El'yashberg, F. Ye. "Report on the Conference of Scientific Bases of the Ukrainian Central Science-Research Institute of Orthopedics and Traumatology imeni Professor M. I. Sitenko [Stalino, November 1947]," -- Author indicated in table of contents--
In symposium: Uchen. zapiski (Ukr. tsentr. nauch.-issled. in-t ortopedii i travmatologii im. Sitenko), Khar'kov, 1948, p. 179-88

So: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)

EL'YASHBERG, F. Ye.
EL'YASHBERG, F. Ye., starshiy nauchnyy sotrudnik

Old traumatic dislocations of the hip and their therapy. Ortop.
travm. i protez. no.4:13-16 JI-Ag '55. (MLRA 8:10)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta ortopedii
i travmatologii im. N.I.Sitenko (dir.-zasluzhennyi deyatel' nauki
prof. N.P.Novachenko)

(HIP, dislocations,
ther.old disloc.)

(DISLOCATIONS,
hip, ther.,old disloc.)

EL'YASHBERG, F.Ye., starshiy nauchnyy sotrudnik

Thirty years of medical educational, and public activities of N.P.
Novachenko. Ortop.travm. i protez. 20 no.6:10-15 Je '59.

(MIRA 13:3)

(BIOGRAPHIES,
Novachenko, Nikolai P. (Rus))

NOVACHENKO, Nikolay Petrovich, prof.; EL'YASHBERG, Faina Yevseyevna,
starshiy nauchnyy sotrudnik; KORZHA, A.A., red.; GITSHSTEIN, A.D.,
tekhn.red.

[Constant traction; method and technic] Postoiannoe vytiazhenie;
metodika i tekhnika. Kiev, Gos.med.isd-vo USSR, 1960. 239 p.
(MIRA 13:10)

1. Chlen-korrespondent AMN SSSR (for Novachenko).
(EXTREMITIES(ANATOMY)--FRACTURES)

EL'YASBERG, F. Ye., starshiy nauchnyy sotrudnik

Role of skeletal traction in some operations on the bones and joints. Ortop., travm. i protez. no.12:28-32 '61.

(MIRA 15:2)

1. Iz Ukrainского nauchno-issledovatel'skogo instituta ortopedii i travmatologii im. M. I. Sitenko (dir. - chlen-korrespondent AMN SSSR prof. N. P. Novachenko)

(BONES--SURGERY) (ORTHOPEDIA)

EL'YASHBERG, F.Ye., starshiy nauchnyy sotrudnik; ALEKSANDROVA, I.A., kand.
med. nauk

Disability analysis following fractures of the femur and leg bones;
based on data of the Medical Expert Commission for Work Capacity
Evaluation and of the M.I. Sitenko Ukrainian Institute of Ortho-
pedics and Traumatology. Ortop., travm. i protez. no.9:67-72 '62.
(MIRA 17:11)

1. Iz Ukrainського instituta ortopedii i travmatologii imeni Si'enko
(dir. - chlen-korrespondent AMN SSSR prof. N.P. Novachenko). Adres
avtorov: Khar'kov, Pushkinskaya ul., d.80, Institut ortopedii i
travmatologii.

EL'YASHBERG, F.Ye., starshiy nauchnyy sotrudnik (Khar'kov)

Review of F.W. Rathke's book "Manual for the hospital orthopedist".
Ortop., travm. i protez. 24 no.11:85 N '63.

(MIRA 17:10)

L 18173-63 EPR/EWT(d)/EPF(c)/EWT(l)/EPF(n)-2/EWP(q)/EWT(m)/BDS AFFTC
ASD/SSD/IJP(c) Po-l/Pr-l/Pu-l JD/WW/JW/JG/DE

ACCESSION NR: AP3005216

S/0053/63/080/002/0331/0337

AUTHORS: Bresler, M. S.; Kogan, A. V.; Shalyt, S.S.; Elyashberg, G. M. 123

TITLE: All-union conference on low-temperature physics 89

SOURCE: Uspekhi fizicheskikh nauk, v. 80, no. 2, 1963, 331-337

TOPIC TAGS: Low temperature physics, conference

ABSTRACT: The 1962 annual Vsesoyuznoye soveshchaniye po fizike nizkikh temperatur (All-union conference on low-temperature physics) was held in Leningrad from 26 June through 1 July. The introductory address was made by N. Ye. Alekseyevskiy, chairman of Ucheny'y sovet problemy fiziki nizkikh temperatur (Science council for low-temperature problems). V. P. Peshkov discussed the basic trends of research and the various results obtained since the time of the preceding conference. B. N. Yesel'son and V. G. Ivanov extended the surface-tension/measurements hitherto conducted for weak solutions of He³ in He³ to include large He³ concentrations (10--50%). K. N. Zinov'yeva described investigations of the diagram of state of He³-He⁴ solutions at elevated pressures and at temperatures below 1.5°K. N. G. Bereznyak, I. V. Bogoyavlenskiy, and B. N. Yesel'son directed attention

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ACCESSION NR: AP3005216

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primarily to solidification in mixtures containing up to 76% He³. D. A. Tsakadze reported measurements of the coefficient of mutual friction along vortex lines. Yu. G. Mamaladze presented a theoretical treatment of critical velocities for vortex formation in He II. A. F. Andreev investigated the influence of conduction electrons on certain phenomena on the boundary between a metal and liquid helium. I. P. Ipatova and G. M. Eliashberg presented a theoretical study of the paramagnetic relaxation in liquid He³. N. V. Zavaritskii described an investigation of the tunnel effect between a tin film and monocrystalline samples of varying crystallographic orientation. Various problems in the synthesis of superconducting alloys possessing extremely high critical magnetic fields (in the hundreds of thousands of Oersteds) and their use in solenoids for generation of strong magnetic fields formed the subjects of several papers (N. E. Alekseyevskiy, et al., B. G. Lazarev, et al., V. R. Karasik, S. Sh. Akhmedov). A. M. Kolchin, N. I. Kriyko, and N. M. Reynov measured the surface impedance of the alloy Nb - Zr. N. B. Brandt and N. I. Ginzburg have found a large difference in the properties of the two superconducting modifications of bismuth. B. G. Lazarev, L. S. Lazareva (Kan), and V. I. Makarov continued their previous studies of the pressure dependence of the critical temperature for tin and thallium. Measurements of the pressure dependence of the critical temperature for Nb₃Sn were reported by

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B. G. Lazarev, L. S. Lazareva (Kan), O. N. Ovcharenko, and A. A. Matsakov. The quenching of superconductivity by current and the distribution of phases in the intermediate state have been investigated by N. E. Alekseyevskiy and E. A. Troynar by the ferromagnetic powder technique. A study has also been undertaken of the kinetics of the quenching of superconductivity by current (A. P. Smirnov, A. V. Runyantseva, and V. N. Totubalin). A theoretical paper by I. A. Privorotskiy was devoted to the absence of an isotope effect for ruthenium.²¹ A paper by M. S. Khaykin and colleagues - R. T. Mina and V. S. Ekel'man - dealt with a cyclotron resonance of tin, lead²² and bismuth. V. F. Gantmakher found a new dimensional effect in thin specimens of tin while making measurements of the surface impedance of the samples at frequencies of 1 - 5 Mc.

[For Complete Set See: Bresler, M. S.¹
All-union conference on low-temperature physics *pl*

Set 1/2, Card 3/3

L 18173-63

EPR/EWT(d)/EPF(c)/EWT(l)/EPF(n)-2/EWP(q)/EWT(m)/BDS AFPTC

ASD/SSD/IJP(C) Ps-l/Pr-l/Pu-l JD/WW/JW/JG/DE

ACCESSION NR: AP3005216

S/0053/63/080/002/0331/0337 157

AUTHORS: Bresler, M. S.; Kogan, A. V.; Shalyt, S. S.; Elyashberg, G. M. 91

TITLE: All-union conference on low-temperature physics

SOURCE: ²¹Uspekhi fizicheskikh nauk, v. 80, no. 2, 1963, 331-337

TOPIC TAGS: Low temperature physics, conference

ABSTRACT: E. P. Vol'skiy measured the quantum oscillations in the quasistatic conductivity of bismuth in a magnetic field at frequencies of 3 - 5 Mc. Papers by V. P. Naberezhnykh, A. A. Galkin and V. L. Mel'nik, and by P. A. Bezugly, A. A. Galkin and A. I. Pushkin dealt with investigations of cyclotron resonance and magnetoacoustic resonance in the same samples of aluminum, which made possible the direct comparison of results and simplified the reconstruction of the topology of the Fermi surface. N. E. Alekseyevskiy reported on galvanomagnetic investigations of the transition metals (N. E. Alekseyevskiy, V. Egorov, B. N. Kazak, and G. E. Karstens) in strong magnetic

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fields (constant to 35 kOe and pulsed to 200 kOe). N. E. Alekseyevskiy also noted the applicability of galvanomagnetic measurements to the study of the Fermi surfaces of the transition metals, since the purity achieved in specimens of these metals is as yet far from that required by such methods as cyclotron resonance. N. E. Alekseyevskiy and Yu. P. Gaydukov have measured the anisotropy of the electrical resistance and of the Hall effect in cadmium, zinc and thallium; open Fermi surfaces were found for all of these metals. V. G. Volotskaya and N. Ya. Fogel' have investigated galvanomagnetic phenomena in very pure aluminum (resistivity ratio $300^\circ/4^\circ$ 2500-2000 as compared with previous values not exceeding 2000). B. N. Aleksandrov reported on a study of dimensional effects in a longitudinal magnetic field for high-purity tin, zinc, and aluminum. E. A. Kaner described a theory which he has developed for acoustic cyclotron resonance. N. B. Brandt, N. N. Stupochenko and T. F. Dolgolenko investigated the fine structure of the quantum oscillations in the magnetic susceptibility of bismuth in various crystalline directions at ultra-low temperatures. The amplifications of ultrasound in semi-metals was studied by R. F. Kazarinov and V. G. Skobov. L. A. Fal'kovskiy and A. A. Abrikosov have computed the energy spectrum the "bad" metals of the fifth group (bismuth, arsenic, antimony) by group theory methods, utilizing qualitative ideas concerning the

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of cuprous oxide. Yu. N. Obratzov developed a theory for thermomagnetic effects in semiconductors in quantized magnetic fields. A paper by I. I. Boyko, E. I. Rashba and V. I. Sheka analyzed the conditions leading to the possible observation of a new resonance effect in semiconductors, due to spin-orbit coupling. M. I. Kaganov and I. M. Lifshits computed the absorption of light in a metal whose Fermi surfaces contain degenerate points (evidently this is characteristic only of graphite). The Shubnikov-de Haas effect in $A^{III}B^{IV}$ compounds of electronic type was investigated in pulsed fields of up to 400 kOe by Kh. I. Amirzhanov, R. I. Bashirov, Yu. E. Zakiev, and A. Yu. Mollayev. G. V. Yemel'yanenko and D. N. Nasledov studied the electrical properties of gallium arsenide having a carrier concentration of $5 \times 10^{15} - 5 \times 10^{16} \text{ cm}^{-3}$, but with varying total impurity concentrations. N. E. Alekseyevskiy, Fam Zui Khien, V. G. Shapiro and V. S. Shpinel' have measured the resonance absorption probability for 28.3 keV gamma-quanta in slices of crystalline tin cut along various crystal planes. Resonance absorption of 35 keV gamma-quanta in Te^{125} formed the subject of a paper by V. V. Sklyarevskiy, B. N. Samoylov, E. P. Stepanov, I. I. Lukashevich, and R. A. Manakhov. Yu. M. Kagan delivered his paper "Toward a Theory for the Redward Thermal Displacement of the "Mossbauer Line". Papers "Assymetry of -radiation in Certain Nuclei, Polarized in an Alloy with Iron" and "Nuclear Specific Heats

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structure of the bismuth type of lattice and the nature of the transition from "good" metals to dielectrics under deformation. R. G. Arkhipov derived a criterion for the occurrence of metals with small electron concentrations. M. I. Kaganov and V. G. Peschanskiy analyzed various mechanisms for the absorption of ultrasound in metals. V. P. Dobrego and S. M. Ryvkin studied conductivity in germanium alloyed with Group V or III impurities and having carrier concentrations of $10^{15} - 10^{16} \text{ cm}^{-3}$, in the presence of compensating impurities. S. M. Ryvkin, V. P. Dobrego, B. M. Konovalenko, and I. D. Yaroshetskiy have observed the appearance of the so-called induced impurity breakdown in germanium samples of the same degree of purity, but fully compensated. M. I. Kaganov proposed that attempts be made to observe additional exciton waves in a crystal due to the presence of space dispersion, using the deceleration of fast particles in a dielectric. L. S. Kukushkin spoke on his theory of non-radiative transition processes in molecular crystals. A paper by A. R. Kessel and U. Kh. Kopvilcm presented a calculation of the sensitivity of a quantum phonon counter which utilizes atoms in the ground state rather than in an excited state, so as to reduce the noise level. A paper was also presented by A. A. Kaplyanskiy on the influence of uniaxial deformations upon the optical spectra of crystals of the type of Ca F_2 , Li F , etc., containing various impurities, as well as upon the exciton spectrum. 27

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of Certain Elements Alloyed with Iron" were delivered by A. V. Kogan, V. D. Kul'kov, L. P. Nikitin, N. M. Reynov, M. F. Stel'makh, and M. Shott. "Dynamic Polarization of Protons in Lanthanum-Magnesium Double Nitrate" was reported by V. I. Iushchikov, A. A. Manenkov, and Yu. V. Taran. A large number of papers concerned with the investigation of the properties of ferro- and antiferromagnetic substances were presented at the conference. A special session was devoted to techniques for the production of low temperatures and to methods for making various low temperature measurements. A number of papers dealt with problems concerning the mechanical properties and optics of crystals at low temperatures, and concerning techniques for producing high pressures and strong pulsed magnetic fields for low temperature research. On the last day of the conference, summaries of the papers presented at the various sectional sessions were presented by their respective chairmen. As the conference chairman, N. E. Alekseyevskiy, remarked in conclusion, only the practice of combining plenary sessions with current sessions of individual sections can, in the opinion of the Scientific Council for the Problems, make it possible to "boil down" to reasonable dimensions the annually increasing flood of papers on low temperature physics.

ASSOCIATION: NONE

SUBMITTED: 00

DATE ACQ: 15 Aug 63

SUB CODE: PH

NO REF SOV: 000

ENCL: 00

For Complete Set See: Bresler, M. S.

OTHER: 000

Set 2/2, Card 5/5

All-union conference on low-temperature physics

L 00772-67 EMT(m)/EMP(t)/ETI/EMP(t) IJP(6) JD/MW

ACC NR: AP6022883

SOURCE CODE: UR/0121/66/000/004/0012/0016

AUTHOR: El'yasberg, M. Ye.

28

B

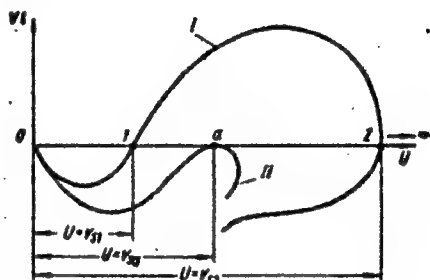
ORG: None

TITLE: Absolute vibration stability with respect to cutting speed in metal-cutting machine tools

SOURCE: Stanki i instrument, no. 4, 1966, 12-16

TOPIC TAGS: machine vibration, metal cutting machine tool

ABSTRACT: Stability regions are set up with respect to the cutting speed v_g for a metal-cutting machine tool considered as a self-oscillating system. In general, a system with given parameters (except v_g) with two degrees of freedom has a first stability region 0-1 (see figure), a region of instability 1-2 and a second stability region 2- ∞ . This is taken as the basic system with one degree of freedom in the direction x of the force of friction Q and the other



Card 1/2

UDC: 621.9-752.001.5

L 00772-67

ACC NR: AP6022883

degree of freedom in the direction y of the cutting force P . The region of instability is reduced by increasing the damping coefficients d , and when the damping coefficient reaches $d_x = d_{xa}$, this region of instability disappears. In this case the boundary curve II is tangent to axis U at point a which determines the stability boundary for the system, i. e. absolute stability with respect to cutting speed. Consideration is also given to the boundary curve which separates the stability region with respect to two parameters—cutting speed and the width of the layer which is removed. Formulas are derived for the relationship between the parameters of the system under conditions of absolute stability with respect to cutting speed. A physical interpretation of these conditions is given and practical application of the proposed method for calculating absolute stability of complex vibrational systems is illustrated. Orig. art. has: 4 figures, 22 formulas.

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 005

awm

Card 2/2

EL'YASHEV, K.I.

EL'YASHEV, K.I. (Berezovsk)

Dynamics of silicosis in miners. Gig.truda i prof.zab. 1 no.3:
7-11 My-Je '57. (MIRA 11:1)

1. Berezovskaya opytaya stantsiya Instituta gigiyeny truda i
profzabolevaniy AMN SSSR.
(LUNGS--DUST DISEASES)
(GOLD MINES AND MINING--HYGIENIC ASPECTS)

EL'YASHEV, L.
STEPANOVA, V.; EL'YASHEV, L.

Reports of supply organizations. Bukhg.uchet 15 no.10:25-27 0
'56. (MLRA 9:11)

(Accounting)

EL'YASHEV, L.

STEPANOVA, V.; EL'YASHEV, L.

Concerning the unprofitableness of producing consumers' goods at
heavy-industry enterprises. Fin.SSR 17 no.11:67-70 N '56.
(Russia--Manufactures) (MLRA 9:12)

MAKSIMOV, G.; OVODOV, G.; ML'YASHEV, L.; SLAVNYI, I.D., otv.red.;
ROSHCHINA, L., red.isd-va; LEBEDEV, A., tekhn.red.

[The new price scale] Novyi masshtab tsen. Moskva, Gosfin-
isdat, 1960. 34 p. (MIRA 14:2)
(Price regulation)

EL'YASHOV, L.

Prices for the products of heavy industry. Fin. SSSR 21 no.8:22-30
Ag '60. (MIRA 13:8)
(Prices)

EL'YASHEV, L.

Shortcoming in planning the number of engineers and technicians.
Fin. SSSR 23 no.3:41-46 Mr '62. (MIRA 15:3)
(Technicians in industry)

ARALOV, V.; EL'YASHEV, L.

Improving the quality of production is the necessary condition
for increasing profit. Fin. SSSR 37 no.1:35-39 Ja '63.

(MIRA 16:2)

(Quality control)

~~EL'YASHEV, L.I.~~

DVIZHKOV, P.P.; YEVGENOVA, M.V.; MOLOKANOV, K.P.; MOROZOV, A.L.;
MARTSINKOVSKIY, B.I. [deceased]; EL'YASHEV, L.I. (Moskva)

Classification of pneumoconiosis. Gig.truda i prof.zab. 1 no.3:
3-7 My-Je '57. (MIRA 11:1)

1. Institut gigiyeny truda i profzabolevaniy AMN SSSR.
(LUNGS--DUST DISEASES)

BOULEVARD MEDICAL 1957 Vol. 11/6 Pathology June 58

1843. PRIMARY LUNG SARCOMA AND SILICOSIS (Russian text) - Dvishkov
P. P. and Eliashev L. I. Inst. of Labour Hyg. and Occup. Dis., Mos-
cow - VOP. ONKOL. 1957, 3/5 (638-640) illus. 1
Autopsy of a 38-year-old man who had been working as a borer in gold mines for
over 7 yr. showed tumour of the right lung with metastases into the left lung and
bronchial lymph nodes, silicosis of both lungs and the regional lymph nodes. His-
tologically the tumour was a polymorphocellular sarcoma. (V, 15, 16, 17)

EJ. YASHIN, L.I., kand.med.nauk

Late silicosis. Bor'ba s sil. 4:29-34 '59. (MIRA 12:11)

1. Institut gigiyeny truda i profsabolevaniy AMN SSSR.
(LUNGS--DUST DISEASES)

EL'YASHEV, L.I. (Berezovsk)

Pneumokoniosis in bauxite miners. Gig. truda i prof. zab. 4 no.4:
28-32 Ap '60. (MIRA 15:4)

1. Opytnaya protivosilikoznaya stantsiya.
(MINING ENGINEERING—HYGIENIC ASPECTS)
(LUNGS—DUST DISEASES)

EL'YASHEV, L.I.

X-ray observations of the results of collapse therapy in silico-
tuberculosis. Ber'ka s. sil. 6:299-302 '64 (MIRA 19:2)

1. Institut gigiyeny truda i professional'nykh zabolevaniy AN
SSSR i Institut profilaktiki pnevmokontiozov.

SOV/68-59-7-21/33

AUTHORS: Starkov, I.D., El'yashev, M.I. and Kalita, Z.S.

TITLE: A New Method of Denitration of Acid

PERIODICAL: Koks i khimiya, 1959, Nr 7, pp 53-54 (USSR)

ABSTRACT: A method of denitrating sulphuric acid before it is used for the production of ammonia sulphate is proposed. It consists of an addition to the acid of 0.1 - 0.3% of heavy benzole containing a considerable proportion of unsaturated compounds. The mixture is intensively stirred for one hour by blowing air. A complete denitration of the acid takes place. The method was tested under industrial conditions with satisfactory results.

ASSOCIATION: Gorlovskiy koksokhimicheskiy zavod (Gorlovskiy Coking Works)

Card 1/1

EL'YASHEVA, M. A.

Cand. Tech. Sci.

Dissertation: "Investigation of a Hydraulic Pulsation Type Machine for Fatigue Testing."
Moscow Order of the Labor Red Banner Higher Technical School imeni N. E. Bauman,
26 Jun 47.

SO: Vechernyaya Moskva, Jun, 1947 (Project #17836)

166T72

USSR/Metals - Testing Equipment Jul 50

"Wire Tensometers for Measuring Plastic Deformations," M. A. El'yasheva, V. P. Shchegolev

"Zavod Lab" Vol XVI, No 7, pp 890-891

Outlines possibility for measuring greater relative deformations with wire tensometers. Discusses results of experiments for using various materials for wires. Wires most suitable for determination of considerable plastic deformations are those made of nichrome and annealed constantan. Best results shown by gauges made of annealed constantan wire

166T72

USSR/Metals - Testing Equipment (Contd) Jul 50

of 0.03 mm diameter. Concludes range of deformations measured with wire tensometers may be increased to 5-6%.

166T72

EL'YASHEVA, M. A.

EL' YASHNEVA, M.A.

ANTIPOV, K.F., inzhener; BALAKSHIN, B.S., doktor tekhnicheskikh nauk, professor; BARYLOV, G.I., inzhener; BEYZEL'MAN, R.D., inzhener; BERDICHEVSKIY, Ya.G., inzhener; BOBKOV, A.A., inzhener. KALININ, M.A., kandidat tekhnicheskikh nauk; KOVAN, V.M., doktor tekhnicheskikh nauk, professor; KORENEV, V.S., doktor tekhnicheskikh nauk; KOSILOVA, A.G., kandidat tekhnicheskikh nauk; KUDRYAVTSEV, K.T., doktor khimicheskikh nauk, professor; KURYSHEVA, Ye.S., inzhener; LAKHTIN, Yu.M., doktor tekhnicheskikh nauk, professor; MAYERMAN, M.S., inzhener; NOVIKOV, M.P., kandidat tekhnicheskikh nauk; PARIYSKIY, M.S., inzhener; PEREPONOV, M.N., inzhener; POPILOV, L.Ya., inzhener; POPOV, V.A., kandidat tekhnicheskikh nauk; SAVERIN, M.M., doktor tekhnicheskikh nauk, professor; SASOV, V.V., kandidat tekhnicheskikh nauk; SATEL', E.A., doktor tekhnicheskikh nauk, professor; SOKOLOVSKIY, A.P., doktor tekhnicheskikh nauk, professor [deceased]; STANKOVICH, V.G., inzhener; TRUMIN, Yu.L., inzhener; KHRAMOV, M.I., inzhener; TSETLIN, L.B., inzhener; SHUKHOV, Yu.V., kandidat tekhnicheskikh nauk; BABKIN, S.I., kandidat tekhnicheskikh nauk; VOLKOV, S.I., kandidat tekhnicheskikh nauk; GORODZTSKIY, I.Ye., doktor tekhnicheskikh nauk, professor; GOBOSHEIN, A.K., inzhener; DOSCHATOV, V.V., kandidat tekhnicheskikh nauk; ZAMALIN, V.S., inzhener; ISAYEV, A.I., doktor tekhnicheskikh nauk, professor; KEDROV, S.N., kandidat tekhnicheskikh nauk; MALOV, A.M., kandidat tekhnicheskikh nauk; MARDANYAN, M.Ye., inzhener; PANCHENKO, K.P., kandidat tekhnicheskikh nauk; SEKHETEV, D.M., inzhener; STAYEV, K.P., kandidat tekhnicheskikh nauk; SYROVATCHENKO, P.V., inzhener; TAURIT, G.B., inzhener; EL' YASHNEVA, M.A., kandidat tekhnicheskikh nauk;

(Continued on next card)

ANTIPOV, K.F. --- (continued) Card 2.

GRANOVSKIY, G.I., redaktor; DUBININ, P.I., redaktor; UGAR, V.N., redaktor; CHARNKO, D.V., redaktor; ANTON, A.Ye., redaktor, redaktor [deceased]; SOKOLOVA, T.P., redaktor.

[Machine builder's manual] Spravochnik po stroitel'stву mashinostroyeniya v dvukh tomakh, red.sovet V.M. Kozlov. Odessa: Gos.izdat. mashinostroyeniya i dr. Moskva, Gos.nauchno-tekhnicheskaya knizhnitsa. 1958. Vol. 1. (Pol red. A.G. Kosilov). 128 s. (128 s.). (Mashinostroyeniye). (Machinery industry).

~~EL~~ EL'Yasheva, M.A.

135-5.7/14

SUBJECT: USSR/Welding.

AUTHORS: Orlov, B.D., Candidate of Technical Sciences, Chuloshnikov, P.L., Engineer, and El'Yasheva, M.A., Candidate of Technical Sciences.

TITLE: Strength of Spot-Welded and Roller-Welded Joints in Titanium "BT1A". (Prochnost' soyedineniy titana "BT1A", vypolnennykh tochechnoy i rolikovoy svarkoy).

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, # 5, pp 19-22 (USSR)

ABSTRACT: The investigation described had the purpose of comparing the properties of titanium "BT1A" with the properties of steel "1X18H9-H" for which titanium may be a replacement giving an economy in weight. Both metals were tested under static load, under cyclic fatigue load, and under pressure load. The technology of specimen preparation and of testing is given in detail.

The following conclusions have been made:

1. The static strength of spot-welded and roller welded joints of titanium "BT1A" is not below the static strength of those made of steel "1X18H9-H", despite the strength of the basic metal "BT1A" being 25% below the strength of the basic metal

Card 1/2

EL'YASHEVA. M.A.

135-5-8/14

SUBJECT: USSR/Welding.

AUTHORS: ~~E~~El'yasheva, M.A., Candidate of Technical Sciences, and
Tret'yakov, F.Ye., Candidate of Technical Sciences.

TITLE: Strength of Titanium "BT1A" and Its Welded Joints at Different Temperatures. (Prochnost' titana BT1A i ego svarnykh soyedineniy pri razlichnykh temperaturakh).

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, # 5, pp 22-24 (USSR).

ABSTRACT: The article gives data on the strength of technical titanium "BT1A" obtained in experiments with mechanical arc welding in argon, in butt joints welded without melting electrodes, and in lap-spot joints. Sheet titanium of 1.4 mm thickness was taken as base metal containing 0.06 % C and 0.12% Al, traces of iron and silicon, 0.013 % H₂, and 0.13 O₂. The technology of the tests is given in detail. Recrystallization processes and the nature of failures at different temperatures were studied. A difference in the behaviour of weld metal and base metal was observed, as for instance; at temperatures above 100°C failures occur in the base metal only; with rising temperature (from 0° and higher) the strength of spot welds decreases in lesser degree than the

Card 1/3

135-5-8/14

TITLE:

Strength of Titanium "BT1A" and Its Welded Joints at Different Temperatures. (Prochnost' titana BT1A i ego svarnykh soyedineniy pri razlichnykh temperaturakh).

strength of the base metal; with dropping temperatures (from 0° to -196°C) the strength of welds decreases, whereas the strength of base metal increases.

In general, the results obtained demonstrated that the welds possessed a sufficiently high static strength as compared to the base metal at normal and at higher temperatures. The butt welds had the same static strength as the base metal. The spot welds had a lower strength at normal temperatures than the base metal. With rising temperatures this difference decreased, but at temperatures dropping below zero it increased and the strength of spot welds abruptly decreased in comparison with the base metal.

The data obtained by L.N. Sokolov, V.P. Elyutin, and V.I. Yaleskiy ("Izvestiya Akademii Nauk SSSR" #3, 1954) are mentioned as being in accordance with the results of subject investigation.

The article contains 3 diagrams and 3 photographs (micro- and macro-structure).

Card 2/3

135-5-8/14

TITLE: Strength of Titanium "BT1A" and Its Welded Joints at Different Temperatures. (Prochnost' titana BT1A i ego svarnykh soedineniy pri razlichnykh temperaturakh).

ASSOCIATION: Not stated.

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress.

Card 3/3

ELIYASHEVA, M.A.

PCSV/1008

[illegible]

Mr. (title page); Mr. A. Gailer, Doctor of Technical Sciences; M. (Charles Post); V.V. Kharin, Engineer; Tech. M.; B.J. Kodel; Managing M. for Literature on Metal Working and Tool Making; E.D. Koval'skiy, Engineer.

PURPOSE: The book is intended for engineering and technical personnel of heat treatment shops and test laboratories of machine-building plants.

COMMENT: This collection of 26 articles, compiled by 13 authors, aims to acquaint the reader with modern practice in the best treatment of rheumatism. The authors are primarily concerned with the development of various types of physical, local, and heat-resistant diets and with the use of their alloying elements. Material-handling equipment is described at some length. The treatment of alloy, particularly those of titanium, also comes within the scope of the collection. The book is thoroughly illustrated, and a good deal of the material is shown in graphical form. Among the problems dealt with are the treatment of titanium, the introduction of the electronic control of heat-treating equipment, together with fully mechanical tool mechanisms, and the optimum preparation of different alloying elements. There are numerous tables and drawings. Bibliographic listings follow at the end of chapters are predominantly British. The articles comprising this collection are reports delivered at a conference held in the Scientific and Technical Programs House June 7-8, 1966, in Moscow.

Empowering Youth Through Identity Development

05/12/2018

Respectfully, E.E.
In Motion Publishing

Polivoda, T.J.: Mechanisms of the Heat Treatment of Steels

Parvate, B.M. "Magnetic Quality-control Method in the Heat Treatment of Parts

Fortenberry, T.M. Volcanic Ashes and Sandstorms Along

Carroll, Dr. H. Public Strength of Industrial Situation

El Yabero, S.A. Strength of Welded Joints Made of VLD Industrial

UNITED STATES DEPARTMENT OF COMMERCE

Page 6/6

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EL'YASHEVA, M.A.

AUTHOR:
TITLE:

EL'YASHEVA, M.A., POLITOVA, A.I.

32-6-32/54

The Automatic Arrangement of a Hydraulic Machine for Investigations with Repeated Static Stresses. (Avtomaticheskoye ustroystvo k gidravlicheskoy mashine dlya ispytaniya povtorno-staticheskimi nagruzkami, Russian)

PERIODICAL:

Zavodskaya Laboratoriya. 1957, Vol 23, Nr 6, pp 741-742 (U.S.S.R.)

ABSTRACT:

For the purpose of investigating the static resistibility of materials hydraulic tensile testing machines (produced by the firm of Losenhausen as well as of the Russian type MUG) of 15 t each were used. They consist of a distributor box with 2 manometers (with adjustable contacts), a directioning device, a solenoid with lever transmission leading to the exhaust valve and a panel with the electric equipment. The box serves for the distribution of oil either to the manometer (in the case of investigations with repeated static stresses) or to the pendulum dynamometer (for static investigations). The distributor box together with the pendulum dynamometer is connected with the tube system leading to the cylinder. This system is used for measuring force. Stresses and loads are controlled by means of one of the two manometers, which are brought about automatically by means of two contacts

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32-6-32/54
The Automatic Arrangement of a Hydraulic Machine for Investigations
with Repeated Static Stresses.

fitted to the manometers. If normal stress is exceeded, an electric
bell rings and the pump motor is disconnected. The number of
cycles performed before the material is destroyed is fixed by means
of an electric counter.

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress

Card 2/2

MALOV, A.N., kand.tekhn.nauk; BABKIN, S.I., kand.tekhn.nauk; VOLKOV, S.I.,
kand.tekhn.nauk; GORODETSKIY, I.Ye., prof., doktor tekhn.nauk;
GOROSHKIN, A.K., inzh.; DOSCHATOV, V.V., kand.tekhn.nauk; ZAMALIN,
V.S., inzh.; ISAYEV, A.I., prof., doktor tekhn.nauk; KEDROV, S.M.,
kand.tekhn.nauk; MARDANYAN, M.Ye., inzh.; PANCHENKO, K.P., kand.
tekhn.nauk; SEKRETEV, L.M., inzh.; STAYEV, K.P., kand.tekhn.nauk;
SYROVATCHENKO, P.V., inzh.; TAURIT, G.E., inzh.; KL'YASHEVA, M.A.,
kand.tekhn.nauk; KOVAN, V.M., prof., doktor tekhn.nauk, glavnyy red.;
MARKUS, M.Ye., inzh., red. [deceased]; SOKOLOVA, T.F., tekhn.red.

[Manual for mechanical engineers; in two volumes] Spravochnik tekhnolo-
loga mashinostroitelia; v dvukh tomakh. Glav.red. V.M.Kovan. Chleny
red.soveta B.S.Balakshin i dr. Moskva, Gos.nauchno-tekhn.isd-vo
mashinostroit.lit-ry. Vol.2. Pod red. A.N.Malova. 1959. 584 p.
(MIRA 12:11)

(Mechanical engineering)

25(1)

SOV/135-59-3-11/24

AUTHOR: El'yasheva, M.A., Candidate of Technical Sciences

TITLE: The Effect of the Spot Spacing on the Fatigue Strength of Spot Weld Joints (Vliyaniye shaga na ustalostnuyu prochnost' tochechnykh soyedineniy)

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 3, pp 22-23 (USSR)

ABSTRACT: The results of an experimental investigation of the effect of spot weld spacing in spot weld joints are given. Contrary to the case of the static strength, the fatigue strength limit of sheet metal in a spot weld joint decreases with an increasing space between the spot welds, and the loading upon one single spot increases. The fatigue strength of a spot weld joint as a whole decreases when the spot spacing increases. There are 3 graphs and 1 table.

ASSOCIATION: NIAT

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EL'YASHEVA, m. A.

[illegible]

82286

S/135/60/000/007/002/014
A006/A002

18.7200

AUTHORS: Silin, L.L., Kuznetsov, V.A., Engineers, El'yasheva, M.A., Candidate
of Technical Sciences

TITLE: The Strength of Weld Joints in Aluminum Alloys Produced by Ultrasonic
Welding Process

PERIODICAL: Svarochnoye proizvodstvo, 1960, No. 7, pp. 5-8

TEXT: Information is given on results of investigations into the strength of weld joints produced by ultrasonic welding and subjected to static and vibration loads and to the effect of temperature. Specimens made of 0.8 mm thick "AMr3M" (AMg3M) and 1.2 mm thick "Д 16М" (D16M) alloys were subjected to shearing and breaking tests at 20, 100, 150, 200 and 250°C. The specimens consisted of two plates joined by overlap welding on a laboratory installation equipped with a "УЗГ-10" (UZG-10) generator and a "ПСМ-7" (PSM-7) transformer. A conic steel tool with a removable spheric "ШХ15" (ShKh15) steel tip was used. The dimensions of the tool provided for a triple augmentation of the oscillation amplitude during the transmission from the transformer to the work piece. The amplitude was measured by a contactless vibrometer. The welding time was controlled by the "НБ-52"

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The Strength of Weld Joints in Aluminum Alloys Produced by Ultrasonic Welding Process

(PV-52) electric chronoscope. The frequency of oscillations remained constant during all the experiments; it was checked by a "3Г-11" (ZG-11) sound generator and a "30-" (EO-7) cathode oscillograph. Welding parameters are given in a table. Specimens for comparative tests were welded on a standard spot welding machine using the conventional technology. A comparison of results leads to the following conclusions: The static strength of joints in D16M and AMg3M alloys produced by ultrasonic welding and subjected to shearing and breaking tests at room and higher temperatures is not below the strength of joints obtained by resistance welding. A raise of the temperature to 150°C reduces the strength to 20-25%; and to 40-45% at 250°C. The fatigue limit of overlap joints produced by ultrasonic welding is similar to that of analogous joints obtained by contact welding. Vibration strength of ultrasonic weld joints is extremely high and approaches that of the base metal. It is by 30% higher than the vibration strength of resistance-welded joints. In static tests the stability of strength of ultrasonic welds is lower than that of resistance weld joints. The dispersion

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82286
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A006/A002

The Strength of Weld Joints in Aluminum Alloys Produced by Ultrasonic Welding Process

of results obtained from vibration tests is practically similar for both cases. There are 5 figures and 5 references: 3 Soviet and 2 English. X

ASSOCIATION: Institut metallurgii imeni A.A. Baykova AN SSSR (Institute of Metallurgy imeni A.A. Baykov, AS USSR) Kuznetsov, V.A.; NIAT, El'yasheva, M.A.

Card 3/3

FRIDMAN, Yakov Borisovich; ZILOVA, Tat'yana Kirillovna; DEMINA, Nina Ivanovna; BOBYLEV, A.V., doktor tekhn. nauk, retsenzent; EL'YASHEVA, M.A., kand. tekhn. nauk, red.; BUPAKOVA, O.H., red.; NOVIK, A.Ya., tekhn. red.

[Using the method of rolled-on gratings in investigating plastic deformation and breakdown] Izuchenie plasticheskoi deformatsii i razrusheniia metodom nakatannykh setok. Moskva, Gos. nauchno-tekhn. izd-vo Oborongiz, 1962. 187 p.
(MIRA 15:4)

(Deformations (Mechanics)) (Plasticity)

ELYASHEVA, M.A.

45

PHASE I BOOK EXPLOITATION

SOV/6025

Soveshchaniye po ustalosti metallov. 2nd., Moscow, 1960.

Tsiklicheskaya prochnost' metallov; materialy vtorogo soveshchaniya po ustalosti metallov, 24 - 27 maya 1960 g. (Cyclic Metal Strength; Materials of the Second Conference on the Fatigue of Metals, held May 24 - 27, 1960) Moscow, Izd-vo AN SSSR, 1962. 338 p. Errata slip inserted. 2000 copies printed.

Resp. Ed.: I. A. Odintsov, Corresponding Member of the Academy of Sciences of the USSR; Ed. of Publishing House: A. M. Chernov; Tech. Ed.: A. P. Guseva.

PURPOSE: This collection of articles is intended for scientific research workers and metallurgists.

COVERAGE: The collection contains papers presented and discussed at the second conference on fatigue of metals, which was held at the Institute of Metallurgy in May 1960. These papers deal with the nature of fatigue fracture, the mechanism of formation

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Cyclic Metal Strength (Cont.):

SOV/6025

and growth of fatigue cracks, the role of plastic deformation in fatigue fracture, an accelerated method of determining fatigue strength, the plotting of fatigue diagrams, and various fatigue test methods. New data are presented on the sensitivity of high-strength steel to stress concentration, the effect of stress concentration on the criterion of fatigue failure, the effect of the size factor on the strength of metal under cyclic loads, and results of endurance tests of various machine parts. Problems connected with cyclic metal toughness, internal friction, and the effect of corrosion media and temperature on the fatigue strength of metals are also discussed. No personalities are mentioned. Each article is accompanied by references, mostly Soviet.

TABLE OF CONTENTS:

NATURE OF FATIGUE FRACTURE

Oding, I. A. Diffusionless Mechanism of Formation and Growth of a Fatigue Crack
Card 2/4

3

2

Cyclic Metal Strength (Cont.)

20V/6025

Zaytsev, G. Z. Accumulation of Plastic Strain Under Cyclic Loading	61
Origorovich, V. K. Fatigue Fracture in Relation to the Fibre Orientation in Steel Parts	73
Zaytsev, A. M. Investigation of Laws Governing the Formation of Fatigue Fractures	82
Kobrin, M. M., and P. I. Sokolovskiy. Special Features of Steel Fracture Under Cyclic Loads in Relation to Anisotropy of Its Structure	94

FATIGUE TEST METHODS

Ivanova, V. S. and S. Ye Gurevich. Experimental Verification of the Accelerated Method for Determining Fatigue Strength	110
Elyasheva, M. A. Investigating the Possibility of Applying the Accelerated Method for Determining the Fatigue Strength	

Card 4/9

S/137/62/000/012/051/085
A006/A101

AUTHOR: El'yasheva, M. A.

TITLE: Investigating the possibility of using the high-speed method for determining the fatigue limit under asymmetrical cyclic loading conditions and different technical processings

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1962, 103, abstract 121635 (In collection: "Tsiklich. prochnost' metallov", Moscow, AN SSSR, 1962, 123 - 133)

TEXT: The author describes results obtained in the checking of an accelerated method proposed by V. S. Ivanova for the purpose of determining σ_w ; values for the critical number of cycles, N_{cr} , are given for different materials, during changes in the conditions of the surface layer, the welding method and other technical factors in symmetrical and asymmetrical loading cycles. The data presented are of a statistical nature and based on the systematization and processing of fatigue curves, obtained during investigations of the effect of techniques upon the cyclic strength of Al, Mg and Ti-alloy specimens, alloyed

Card 1/2

Investigating the possibility of...

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A006/A101

steels and other materials. The author shows the satisfactory agreement of N_{cr} in the comparison of specimens subjected to different technical treatment (for the same material). N_{cr} values for alloys do not agree in particular cases, with the critical number of cycles for pure metals; this is explained by the effect of alloying elements upon physical constants, such as specific heat capacity, melting point, and E . The asymmetry of the cycles under otherwise equal conditions, has no noticeable effect on the magnitude of N_{cr} . It is concluded that the accelerated method of determining the cyclic strength is promising in the solution of various technical problems. However, its wide use is limited by the lack of checked fatigue criteria for the majority alloys, and because concrete data are not available on the limitations and the permissible application fields of the method (scale factor, test conditions, etc.). The author points to the necessity of continuing research in this direction by special investigations and the statistical processing of the experimental data available.

L. Gordiyenko

[Abstracter's note: Complete translation]

Card 2/2

S/124/63/000/003/064/065
D234/D308

AUTHOR: El'yasheva, M. A.

TITLE: Investigation of the possibility of application of an accelerated method of determining the fatigue limit in the conditions of asymmetric fatigue cycle, with different technological treatments

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1963, 71, abstract 3V507 (In collection: Tsiklich. prochnost' metallov. M., AN SSSR, 1962, 123-133)

TEXT: The author gives fatigue curves of specimens made of aluminum, magnesium and titanium alloys and alloyed steels subject to bending and tension-compression symmetric and asymmetric cycles. The specimens had different states of the surface layer. The method of welding and other technological factors were varied. The data are used for checking the accelerated method proposed by V. S. Ivanova (Izv. AN SSSR, Otd. tekhn. n., 1960, no. 1; Zavodskaya laboratoriya, 1960, v. 25, no. 5, 593-598 - RZhMekh, 1961, 1V501) on the

Card 1/2

Investigation of the ...

S/124/63/000/003/064/065
D234/D308

basis of the hypothesis of energetic similarity of fatigue destruction and melting of metals. The values of the cyclical constant of destruction α_0 were taken from Ivanova's papers for pure metals corresponding to the bases of alloys used in the present paper. The critical number of cycles N_k was determined from the experimental value of fatigue limit. It is shown that N_k for the same metal or alloy depends little on the cycle asymmetry and the technology of preparation of the specimens. [Abstracter's note: Complete translation.]

Card 2/2

VOLKOV, S.I., kand. tekhn. nauk [deceased]; GORODETSKIY, I.Ye., doktor tekhn. nauk, prof. [deceased]; GOROSHKIN, A.K., inzh.; DOSCHATOV, V.V., inzh.; ZAMALIN, V.S., inzh.; KEDROV, S.M., kand. tekhn. nauk; MALOV, A.N., kand. tekhn.nauk, prof.; MARDANYAN, M.Ye., inzh.; PANCHENKO, K.P., kand. tekhn. nauk; ROZHDESTVENSKIY, L.A., kand. tekhn. nauk; SEKRETEV, D.M., inzh.; SYROVATCHENKO, P.V., kand. tekhn. nauk; TAURIT, G.E., inzh.; EL'YASHEVA, M.A., kand. tekhn. nauk; YAKUSHEV, A.I., doktor tekhn.nauk, prof.; KOVAN, V.M., doktor tekhn.nauk, prof., red. [deceased]; SERGEYEV, V.M., inzh., red. izd-va; CHERNOVA, Z.I., tekhn. red.; EL'KIND, V.D., tekhn. red.

[Handbook for the mechanical engineer] Spravochnik tekhnologamashinostroitelia; v dvukh tomakh. Glav. red. V.M.Kovana. Moskva, Mashgiz. Vol.2. 1963. 912 p. (MIRA 16:7)
(Machinery--Design and construction)

ARKHANGEL'SKIY, N., BABAYEV, M., GLADKOV, M., EL'YASHEVICH, Z., KAMYSHKO, A.;
KUZYATIN, G., KULIYEV, S., MOVSESOV, M., POPOV, A., PORTNOY, T.,
RIZNIK, A., SEROVA, Ye., TARASOV, A., TULIN, V., SHISHKIN, O.,
SHKOL'NIKOV, B., SHTURMAN, L., CHESNOKOV, V., EFENDIZADE, A.

K.N. Kulizade, candidate of engineering. Energ. biul. no. 23-24

My '58.

(MIRA 11:8)

(Kulizade, Kiazim Novruz, 1908-)

EL'YASHOV, L.

USRR/Banking 4908.0100 Sep 1947
Shoe Manufacturing 4414.0500

"Results of Lack of Control," L. El'yashov, 24 pp

"Gov Finansy" Vol VIII, No 9

Criticizes lack of control in connection with ex-
penditures for capital construction, capital re-
pairs, and maintenance work. Divided control over
such expenditures between Prombank (Industrial Bank),
Gosbank (State Bank), and main administrations is
especially criticized. Burevestnik footwear factory
criticized for covering up such expenditures through
a contract device between two factory depts. Per-
sonalities involved were Koytman, Deputy Director

LC 15078

USRR/Banking 4908.0100 (Contd) Sep 1947

of the plant, and Shmel'man, Capital Repair Work
Dept Head. Indication that a wage of 35-40 rubles
a day for construction work at Burevestnik footwear
factory was too high.

15078

15078

LC

ARALOV, V.; ML'YASHOV, M.

Discounts on the grade and quality of goods. Sov. torg. 34 no.12:
33-36 D '60. (MIRA 13:12)
(Russia—Manufactures) (Russia—Commerce)

SOV/3-58-11-17/38

AUTHORS: Netsenko, A.V., Candidate of Economic Sciences, and El'yashova, L.L., Assistant

TITLE: In This Way the Ability of Creative Thinking is Being Developed (Tak razvivayetsya umeniye tvorcheski myslit')

PERIODICAL: Vestnik vysshey shkoly, 1958, Nr 11, pp 45 - 49 (USSR)

ABSTRACT: The Chair of Political Economy of the Leningrad Polytechnical Institute is devoting much consideration to seminar exercises, particularly to the method in which they are conducted. The main purpose of a seminar is to arouse in youth love for science, inquisitiveness, ability to think independently and to understand the complicated phenomena of social life. For this reason, the Chair strives to ensure that the students comprehend well the material they are dealing with, that they know how to prove the correctness of the theses expressed, can reply to questions for which there are no ready answers in the textbook, apply the matter they have learned to events of international and domestic life, etc. The authors then go on to explain how a seminar can be made creative. For this purpose they quote an ex-

Card 1/2

Elyukim, S. B.

AUTHORS: Gorelik, R. Ya., Elyukim, S. B. 119-1-10/13

TITLE: Piston Pressure Gauge With Automatic Load Shifts
(Porshnevoy manometr s avtomaticheskoy smenoy
gruzov).

PERIODICAL: Priborostroyeniye, 1958, Nr 1, pp. 29-29 (USSR)

ABSTRACT: The characteristic feature of this pressure gauge consists in a stepwise arranged headpiece which is rigidly connected to the piston. When moving upward the load is taken up stepwise. In the moment when the load on the piston does no longer touch the body of the pressure gauge a constant pressure establishes itself in the whole measuring system which is equal to the weight of the load plus piston divided by the effective surface on which the load is placed. At this moment the measurement is performed.
Together with the piston pressure gauge there are connected 2 signal pressure gauges, 2 relays, 2 magnetic valves and a pressure equalizing reservoir, and they are on the one side connected with the compressed air distribution system and on the other side with a 220 V and 27 V system, This represents the total measurement system.

Card 1/2

Piston Pressure Gauge With Automatic Load Shifts

119-1-10/13

There are 2 figures.

AVAILABLE:

Library of Congress

1. Pressure gages-Operation

Card 2/2

L 1476-66 EWT(d)/T IJP(c)

ACCESSION NR: AP5021863

UR/0280/65/000/004/0192/0194

AUTHOR: Mosevitskiy, I. S. (Moscow); Elyukim, S. B. (Moscow)

TITLE: A problem of nonlinear programming

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 4, 1965, 192-194

TOPIC TAGS: nonlinear programming, algorithm, computer programming, nonlinear equation

ABSTRACT: Numerous technological objects may be described by a system of algebraic or transcendental equations. In the majority of cases such a (basically nonlinear) system of equations is extremely complex. The authors propose a unique numerical method for the solution of the systems of nonlinear equations or for the study and optimizing of a certain function of the variables of the problem. It is a generalization of Newton's method of tangents and the gradient method for the extremum search, and the authors apply it to the so-called local problems (the search of the root or extremum which is the nearest to the initial approximation). On the basis of the proposed method an algorithm was developed at the Institut atomnoy energii im. I. V. Kurchatova (Institute of Atomic Energy) leading to a universal program of local analysis of nonlinear equations and inequalities

Card 1/2

L 1476-66

ACCESSION NR: AP5021863

on the M-20 computer. The maximum order of the problem under study is 45. The program has already been successfully used for the solution of numerous problems. "The authors thank V. A. Khodakov and N. N. Ponomarev-Stepnoy for their participation in the discussion of the present paper and for their useful remarks." Orig. art. has: 11 formulas.

ASSOCIATION: None

SUBMITTED: 20Jul63

ENCL: 00

SUB CODE: OP, MA

NO REF SOV: 000

OTHER: 001

Cord

2/2

KRAVETS, M.A., insh.; ELXUKIM, S.B.

Optimal vertical planning of a territory. Prom. stral. 43
no. 12:40-41 '65, (MIRA 18:12)

L 45854-66

ACC NR: AP6020359

SOURCE CODE: UR/0104/66/000/003/0083/0084

AUTHOR: Kholyan, A. M. (Engineer); El'yukin, S. B. (Engineer); Onuchin, V. Ya. (Engineer);
Kravets, H. A. (Engineer)

ORG: None

TITLE: Application of computer for designing cable raceways

SOURCE: Elektricheskiye stroitel'stvo, no. 3, 1966, 83-84

TOPIC TAGS: electric wiring, electric cable, electric network, electronic computer / M-20 electronic computer

ABSTRACT: Application of electronic computers to wiring design and circuit calculations is discussed in connection with a paper published by the Ural Branch of the Teploelektroproyekt Institute. The paper in question deals with design considerations and economics of wiring raceway systems used at electric power plants for auxiliary power circuits. An electronic computer of M-20 type was used by the Institute for circuit and conductor calculations on the basis of layouts providing information on cable raceways, cable crossings, junctions, riser columns, interconnections, etc. Numbers were assigned to each raceway, column, connection and special tabular graphs were prepared. The mathematical aspect of calculations is discussed by the authors and some examples of using graphs are explained. Various versions for economical cable laying (shortest distance, cable weight) are briefly examined. The results obtained in cable raceway calculations include the cable length, panel number, consumer number and interconnection numbers.

SUB CODE: 09/ SUBM DATE: None

13
Card 1/1

UDC: 621.315.29